and spasm/pain (22) were the main causes for failure. Failed PTRA proc. were completed via the femoral/brachial artery. Radial artery thrombosis occurred in 47 (4%) of the 1077 pts in whom Doppler flow examination was obtained, either asymptomatic (45) or with very mild symptoms (2). Rate of radial artery thrombosis was 15% with low dose of heparin (≤5000 u) compared with 2% with higher dose (>7000 u). Pseudo-aneurysms, after treatment with external dressing, and AV fistula were obliterated at follow-up. Vascular surgery was needed in 3 pts to retrieve stents lost in the brachial artery (2) or for compartment syndrome (1). No transfusions were needed. Immediate post-procedural ambulation was allowed in all PTRA pts.

Conclusions: In patients with functional palmar arterial arch, clinically significant vascular complications are extremely low despite immediate post-procedural sheath removal under full heparinization, and immediate ambulation. To our knowledge, this represent the largest series of coronary proc. via PTRA.

1005-84 The Clinical Impact of Sidebranch Occlusion and Sidebranch Narrowing After Elective Coronary Stent Placement in STARS

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Complications after PTCA of bifurcation lesions have been related to extent of atherosclerosis within the branch vessel origin. To determine whether branch vessel disease also relates to the risk of sidebranch (SB) compromise after Palmaz-Schatz coronary stenting, we analysed the cineangiograms of 810 pts with bifurcation lesions in the Stent Antithrombotic Regimen Study (STARS). Bifurcation lesions included those with (SBD) and without (No SBD) significant (>50%) SB stenoses. Based on post-stent SB patency, pts were divided into 3 groups (Grp): Grp I: No SB closure (N = 621, 76.7%); Grp II: SB narrowing >30% occlusion (N = 148, 18.3%); Grp III: 100% SB occlusion (N = 41, 5.1%).

	Grp I	Grp II	Grp III	p value
Age, years	60 ± 11	63 ± 11	63 ± 12	0.008
SBD, %	14	14	49	< 0.001
No SBD, %	81	84	51	< 0.001
# of stents deployed	1.5	1.6	1.8	0.01
Death/CABG, %	1/1	0/1	0/5	NS/0.051

6 month target lesion revascularization (TLR) was significantly higher in the Grp III patients (22% versus 9% in Grp II and 10% in Grp I; p = 0.043).

We conclude that: sidebranch occlusion was uncommon (5%) after elective stent placement. Pts with sidebranch occlusion after stenting 1) were older, 2) had more atherosclerotic disease in branch vessel origin, and 3) required more stents, emergency CABG, and TLR than patients without branch occlusion.

1005-85 Stent Distortion During Simulated Side-branch Dilatation

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With increasing use of long stents, dilatation through the side of a stent may be needed to maintain branch patency. To test the effect of dilatation through the side of stents, we simulated side-branch dilatation at an angle of 45° with 2.5, 3.0, 3.5 and 4.0 mm balloons for each of 5 different stent designs (expanded to 3.5 mm) in a plexiglass phantom photographed at 10x magnification. The diameters of the side lumen created, and the extent of stent distortion immediately distal to the simulated side branch were measured.

	AVEGFX	beSTENT	CROWN	MULTI	NIR
Mean Side Lumen Diameter (mm)					
2.5 mm	2.7	2.7	2.3	2.5	2.0
3.0 mm	3.1	2.9	2.5	3.0	2.0
3.5 mm	3.6	3.0	3.0	3.5	2.2
4.0 mm	4.1	3.8*	3.7	3.7	3.6*
Distal Stenosis (%)					
2.5 mm	17	18	16	28	4
3.0 mm	25	42	25	38	36
3.5 mm	25	43	31	48	46
4.0 mm	50	64	38	55	58

* strut rupture

Simulated side branch dilatation consistently distorts the stent in the "major" vessel. The "side branch" ostial size varies with different stent designs and balloon sizes; stent rupture may occur with a 4 mm balloon.

1005-86 Stent Implantation Into Tapering Coronary Arteries Is Associated With Greater Intimal Proliferation in the Distal Stent Segment

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Intracoronary stents are often deployed in tapering arteries where the vessel diameter at the proximal end of the stent is larger than the diameter at the distal end. The implications of this practice on intimal proliferation and the restenosis process are unknown. To study this, 20 mm Gianturco-Rubin stents were deployed in juvenile pigs (n = 13) in the mid-LAD where the artery tapered moderately. Quantitative coronary angiography (QCA) and histomorphologic assessment of the proximal and distal vessel segments were performed at 28 days.

Results: The mean stent-to-artery ratio at the distal end of the stented segment was significantly greater than the proximal end (1.45 ± 0.07 vs 1.31 ± 0.06, p = 0.002).

	MLD pre stent	MLD post stent (mm)	MLD 4 wks (mm)	Neointimal area (mm^2)	% Area stenosis
Proximal	2.40 ± 0.09	2.97 ± 0.09	1.91 ± 0.16	3.10 ± 0.31	64 ± 4.9
Distal	2.19 ± 0.10	2.93 ± 0.10	1.19 ± 0.18	4.11 ± 0.31	82 ± 3.1
P value	0.002	0.80	0.004	0.019	0.092

Conclusions: 1) Stent placement in tapering coronary arteries results in a greater degree of distal arterial injury and subsequently greater intimal proliferation within the distal portion of the stent. 2) These data emphasize the importance of careful stent sizing in coronaries that taper significantly.

1005-87 Debulking Prior to Unprotected Left Main Stenting - What is the Benefit? A Preliminary Report

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Debulking (DB) prior to stenting (S) has been advocated to improve initial in stent dimensions and hopefully long term outcome. Unprotected left main stenosis (ULMS) is an unforgiving treatment site, perhaps ideal for DB + S. We queried a registry with 262 patients consecutively treated with S or other modalities from 25 sites since 1/94 to assess the possible benefit of DB. QCA was performed at a core lab.

	DB + S (n = 26)	S (n = 137)
Age (yrs)	67 ± 10	64 ± 14
LVEF (%)	51 ± 15	53 ± 16
Rest/progressive angina (%)	38.5	36.8
Not CABG candidate (%)	30.8	14.7
Ostial/distal (%)	35/70	55/45
Moderate or severe calcium (%)	55	29
Ref diameter (mm)	3.8 ± 0.7	4.1 ± 0.8
% Stenosis, pre/post	70/7	65/8
Stent number	1.0 ± 0.2	1.1 ± 0.6
In-hospital death, QMI, CABG (%)	8.3	9.8
6 month death, QMI, CABG or PTCA	34.6	32.1

In multivariate testing DB tended weakly to be better for in-hospital outcome (p = 0.16), but there was no difference in 6 month MACE. DB is perhaps, but not dramatically, better than S alone for rx ULMS and deserves further evaluation.

1005-88 Stenting for Small Vessel With Complex Lesion Using New Generation Flexible Stents

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To assess safety and efficacy of new generation flexible stents for small vessel (<3 mm) with complex lesions (type B2/C lesions), we underwent a retrospective comparative study between 4 different flexible stents and Palmaz-Schatz stent (JJIS). Study end points were in-hospital events, angiographic restenosis rate (%DS ≥50%) and target lesion revascularization (TLR) at f llow-up (F/U). Study patient was comprised of 364 patients with 384 lesions (ls) from January 91' to December 96' (table).

Thus, clinical outcome of stenting for small vessel using flexible stents seems to be comparable to that of more rigid JJIS stent. Expanding indication of stenting for complex lesions would be acceptable strategy for a selected cohort by means of flexible stents.